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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,030	08/27/2003	Mitchell Paul Tasman	BBNT-P01-248	5116

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EXAMINER
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BOUTAH, ALINA A

ART UNIT	PAPER NUMBER
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2143

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11/16/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/649,030	Applicant(s) TASMAN ET AL.	
	Examiner Alina N. Boutah	Art Unit 2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12, 14-34, 36-38 and 45-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-34, 36-38 and 45-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

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### **DETAILED ACTION**

This action is in response to Applicant's amendment filed August 32, 2007. Claims 1-12, 14-34, 36-38 and 45-57 are pending in the rejection.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 14, 25, 26, 28, 32, 38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not disclose the step of determining if the second network interface is different than the first network interface as claimed.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-12, 14-34, 36-38 and 45-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,683,885 issued to Sugai et al. (hereinafter referred to as Sugai) in view of USPN 6,769,043 issued to Fedorkow in further view of US 2004/0202164 to Hooper.

Regarding claim 1, Sugai teaches method for transmitting data units from a node in a communications network, the node including a plurality of network interfaces, plurality of network interfaces being associated with respective transmission queues, the method comprising:

identifying one of the one or more network interfaces for transmitting a first data unit (abstract; col. 3, lines 17-45; figure 1);

storing the first data unit in a queue of the at least one queue associated with the identified network interface (figure 2: route table);

retrieving, for the identified network interface, the first data unit from the queue associated with the identified network interface (col. 6, lines 45-56);

determining one of the one or more network interfaces from which the first data unit is to be transmitted (figure 1; col. 5, lines 15-29); and

forwarding the data unit to the determined network interface for transmission when the determined network interface is the identified network interface (figure 1; col. 5, lines 15-29).

However, Sugai does not explicitly teach storing data in transmission queues associated with the first network interface and second network interfaces, respectively, and in response to determining that the second network interface is different from the first network interface,

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forwarding the data unit to the second network interface for transmission. In an analogous art, Fedorkow teaches storing data in transmission queues associated with the first network interface and second network interfaces, respectively (abstract, figure 2).

In another analogous art, Hooper teaches in response to determining that the second network interface is different from the first network interface, forwarding the data unit to the second network interface for transmission [0029].

At the time the invention was made, one of ordinary skill in the art would have been motivated to transmit data in a different interface rather than the interface that was previously assigned in order to ensure that data will get to its destination with minimum delay.

Regarding claim 2, although Sagai does not explicitly teach the method of claim wherein the communications network is an ad hoc network, one of ordinary skill in art would have recognized that this feature is well known in the art (see background of Applicant's specification).

Regarding claim 3, Sugai teaches the method of claim 1 further comprising: determining, prior to storing the first data unit, whether the first data unit is a multicast data unit (col. 5, line 15-29).

Regarding claim 4, Sugai teaches the method of claim 3 further comprising: determining, when the first data unit is not a multicast data unit (col. 5, line 15-29), a priority for the first data unit (col. 2, lines 53-59); and storing the first data unit in a sub-queue within transmission queue associated with the first network interface based on the determined priority (col. 7, lines 6-25).

Regarding claim 5, Sugai teaches the method of claim 3 further comprising: determining, when the first data unit is a multicast data unit, a priority for the first data unit (col. 5, lines 15-29); and storing the first data unit in a sub-queue within transmission queue associated with each of the plurality of network interfaces based on the determined priority (col. 7, lines 6-25).

Regarding claim 6, Sugai teaches the method of claim 3 further comprising: determining, when the first data unit is a multicast data unit, a priority for the first data unit (col. 5, lines 15-29); and storing the first data unit in a sub-queue within transmission queue associated with at least plurality of network interfaces based on the determined priority (col. 7, lines 6-25).

Regarding claim 7, Sugai teaches the method of claim 3 wherein, when the first data unit is a multicast data unit, identifying the second network interface includes: identifying a next node to receive the first data unit from a list of next nodes, and identifying the second network interfaces based on the identified next node (col. 5, lines 15-25 and col. 7, lines 6-25).

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Regarding claim 8, Sugai teaches the method of claim 7, wherein in response to determining that the first network interface is same as the second network interface, storing, a copy of the first data unit in the transmission queue associated with the second network interface and recording a current position in the list of next nodes (figures 10 and 12).

Regarding claim 9, Sugai teaches the method of claim 7 further comprising: dropping the first data unit when no next node is identified from the list of next nodes (col. 2, lines 53-59).

Regarding claim 10, Sugai the method of claim 1 further comprising: assigning a sequence number to the first data unit, and wherein the storing the first data unit includes: storing the sequence number with the first data unit in the output queue associated with the first network interface (figure 3).

Regarding claim 11, Sugai teaches the method of claim 10 further comprising: in response to determining that the first network interface is different than the second network interface, storing the first data unit in a transmission queue associated with the second network interface (figure 6).

Regarding claim 12, Sugai teaches the method of claim 11 wherein the storing the first data unit in the transmission queue associated with the second transmission interface includes: storing the first data unit in the transmission queue associated with the second transmission interface based on the sequence number assigned to the first data unit (figure 8).

Claims 14-24 are similar to claims 1, 3, 4, 5, 7, 8, 13, 10, 11, 12 and 6, respectively, therefore are rejected under the same rationale.

Claim 25 is similar to claim 1, therefore is rejected under the same rationale.

Claims 26 and 27 are similar to claims 14 and 24, therefore are rejected under the same rationale.

Claim 28 is similar to claim 1, therefore is rejected under the same rationale.

Regarding claim 29, Sugai teaches the method of claim 28 further comprising: storing the data unit in a transmission queue associated with the first network interface (figure 2); and subsequent to identifying the second network interface, storing the data unit in a transmission queue associated with the second network interface (figure 2).



Regarding claim 30, Sugai teaches the method of claim 28 further comprising:  
determining whether the data unit is a multicast data unit; and storing, when the data unit is a multicast data unit, the data unit in a transmission queue associated with each of the plurality of network interfaces (col. 5, line 15-29).

Regarding claim 31, Sugai teaches the method of claim 28 wherein the data unit is a multicast data unit, and wherein the method further comprises: storing, for each neighboring node, information indicating whether the multicast data unit has been transmitted to that neighboring node (col. 7, lines 6-25).

Claims 32-34 are similar to claims 28-30, therefore are rejected under the same rationale.

Regarding claim 36, although Sugai does not explicitly teach the network device of claim 32 wherein the plurality of network interfaces are configured to transmit the data units via a wireless link, it would be obvious to one of ordinary skill in the art at the time the invention was made to employ a wireless link in order to make the network more portable, therefore making the network more efficient.

Claim 37 is similar to claim 31, therefore is rejected under the same rationale.

Claim 38 is similar to claim 32, therefore is rejected under the same rationale.

Claims 45-50 are similar to claims 28-31 therefore are rejected under the same rationale.

Claims 51-57 are similar to claim 1, therefore is rejected under the same rationale

### ***Response to Arguments***

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment, while rendering the 112 2<sup>nd</sup> paragraph moot, it raises new ground of rejection. That is, it is not in the original disclosure. The Examiner is unable to find support for the step of determining if the second network interface is different than the first network interface. Applicant is hereby requested to provide support for this limitation. The Examiner will reconsider the rejection accordingly once the support is provided.

In the interview dated August 14, 2007, the Examiner suggested that Applicant further clarify the step of determining that the interface is different. Applicant has not adopted the Examiner's suggestion. Therefore, the Application is not allowed.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alina N. Boutah whose telephone number is 571-272-3908. The examiner can normally be reached on Monday-Friday (9:00 am - 5:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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